Petition

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NO. 81-737

IN THE

SUPREME COURT OF THE UNITED STATES

OCTOBER TERM 1981

JAMES L. McFILLIN

Petitioner

v.

UNITED STATES OF AMERICA

Respondent

PETITION FOR WRIT OF CERTIORARI TO

THE UNITED STATES COURT OF APPEALS

FOR THE FOURTH CIRCUIT

PETITION FOR WRIT OF CERTIORARI

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To the Honorable, the Chief Justice and Associate Justices of the Supreme Court of the United States:

JAMES L. McFILLIN, the Petitioner herein, respectfully prays that a writ of certiorari issue to review the judgment

of the United States Court of Appeals for the Fourth Circuit entered in the above entitled case on August 12, 1981.

QUESTIONS PRESENTED

I. Did A Governmental Agency Violate Petitioner's Rights Under The Fourth Amendment When It Surreptitiously Placed Taggants In A Legally Obtainable Product For The Purpose of Tracing and Investigating The Use Of That Product Without Obtaining Prior Congressional Or Judicial Approval?

II. Does A Governmental Agency Have The Right To Unilaterally And Surreptitiously Place A Tracing Device In A Marketable Product, Purchased By Consumers, For The Purposes Of Tracing And Investigating The Use Of That Product?

III. Where The Government Is The Only Expert In An Experimental Program, Should They Be Held To A Stricter Standard On The Introduction Of Scientific Evidence Than That Applied In Frye v. United States, 293 F. 1013 (D.C. Cir. 1923)?

OPINIONS BELOW

The Court of Appeals entered its opinion on August 12, 1981, No. 80-5063. Said opinion is to be published and is attached.

JURISDICTION

Review is sought of the decision of the United States Court of Appeals for the Fourth Circuit, affirming the convictions of Petitioner in the United States District Court for Maryland, said reported opinion, No. 80-5063, was entered on August 12, 1981.

Jurisdiction of the Court is conferred pursuant to United States Supreme Court Rule 19(b). Petitioner avers that the

Court of Appeals has decided important questions of federal law which have not been, but should be, settled by this Court. Jurisdiction is further conferred by virtue of 28, U.S.C. § 1254(1).

CONSTITUTIONAL PROVISIONS INVOLVED

U. S. Const. Amend. IV

> The right of the people to be secure in their persons, houses, papers, and effects, against unreasonable searches and seizures, shall not be violated, and no warrants shall issue, but upon probable cause, supported by oath or affirmation, and particularly describing the place to be searched and the persons or things to be seized.

U. S. Const. Amend. V

> No person shall be held to answer for a capital, or otherwise infamous crime, unless on a presentment or indictment of a Grand Jury, except in cases arising in the land and naval forces, or in the Militia, when in actual service in time of war or public danger; nor shall any person be subject for the same offense to be twice put in jeopardy of life or limb; nor shall be compelled in any criminal case to be a witness against himself nor be deprived of life, liberty, or property, without due process of

law; nor shall private property be taken for public use without just compensation.

U. S. Const. Amend. IX

The enumeration in the Constitution of certain rights shall not be construed to deny or disparage others retained by the people.

Title 18, Section 844(i)

Whoever maliciously damages or destroys, or attempts to damage or destroy, by means of an explosive, any building, vehicle, or other real or personal property used in interstate or foreign commerce or in any activity affecting interstate or foreign commerce shall be imprisoned for not more than ten years or fined not more than $10,000, or both; and if personal injury results shall be imprisoned for not more than twenty years or fined not more than $20,000, or both; and if death results shall also be subject to imprisonment for any term of years, or to the death penalty or to life imprisonment as provided in section 34 of this title.

STATEMENT OF THE CASE

Petitioner, James L. McFillin, was tried in the United States District Court for the District of Maryland by a jury, the Honorable Frank A. Kaufman, United States District Judge presiding. (K-79-0317) He

was convicted of a violation of 18 U.S.C. Section 844(i), malicious destruction of vehicle by explosives causing death, personal injury and property damage.

Jurisdiction vested in said Court pursuant to Indictments returned July 17, 1979, which were superceded by identical Indictments filed August 21, 1979, for the alleged offenses which occurred at Bethlehem Steel, Sparrows Point, Baltimore, Maryland. (Federal Rules of Criminal Procedure, Rule 18; 28 U.S.C. § 1393, 1441; 18 U.S.C. Section 844(i))

On April 2, 1980, Judge Kaufman imposed a sentence wherein Petitioner was committed to the custody of the Attorney General or his authorized representative for a period of Ten (10) years as to Count No. 1; Thirty (30) years as to Count No. 2; and for Twenty (20) years as to Count No. 3. Said terms of imprisonment as to Counts Nos. 1 and 3 were to run concurrently with

the term of Count No. 2, making a total sentence of Thirty (30) years.

From this judgment a timely appeal was noted in the United States Court of Appeals for the Fourth Circuit, who affirmed the convictions in a published opinion (attached hereto) United States of America v. James L. McFillin, No. 80-5063, Decided August 12, 1981. This opinion is the subject of this Petition For Writ Of Certiorari.

Statement of Facts

On May 10, 1979, the Petitioner's nephew, Nathan Allen, Jr., was killed and Robert Riffe was injured when Allen's truck exploded on the Bethlehem Steel Parking Lot in Baltimore. Sparrows Point and Baltimore County Police called in the Bureau of Alcohol, Tobacco and Firearms ("ATF") to aid in their investigation.

ATF agents discovered fourteen (14) identifiable "taggants" at the scene of the explosion. Taggants are plastic chips con-

taining eight colored layers and are approximately the size of a pinhead. The government alleged at the trial that the discovery of these taggants enabled them to trace the explosives used to a batch of Tovex 2 manufactured by DuPont. The sale of the explosives was "traced" from DuPont to Townsend Explosives, Inc., and then to Jenkins Explosives Sales, Inc. in Martinsburg, West Virginia. Lawrence Jenkins testified that he sold two (2) sticks of Tovex 2 to Petitioner, who signed purchase forms and presented identification, on March 10, 1979, in West Virginia. He also testified that the remaining Tovex 2 he purchased was stolen Easter Weekend, 1979. There was no suggestion that Petitioner was involved in that crime.

Taggants were part of a pilot program developed by Aerospace Corporation pursuant to a contract with ATF for identification of explosives. Taggants allegedly are color-

coded and from reading the colors a qualified employee can identify the manufacturer, the particular "batch" of explosives produced and their subsequent sale or transfer as fas as the last "legitimate purchaser".

Of the three hundred million pounds (300,000,000) of explosives produced annually, only seven million (7,000,000) were "tagged" pursuant to this program. While the ATF manual lists a minimum of twenty (20) taggants as necessary to insure a reliable trace, only fourteen (14) were found in this case, one (1) of which was from a different "batch". Additionally, one thousand (1,000) taggants were placed in each one-half (1/2) pound explosive of Tovex 2, at ATF's instruction, to permit recovery of at least one hundred to two hundred (100 to 200) taggants for each exploded unit.

The only evidence of scientific

acceptability was by government employed witnesses. It was also the first case in which taggant evidence was ever introduced or used. Petitioner introduced evidence from the Institute of Makers of Explosives ("IME") which disputed the conclusions of the reliability of tracing by taggants. The evidence was introduced over Petitioner's objection and he was convicted and sentenced to a total of thirty (30) years.

ARGUMENT

I. The Placement By A Governmental Agency Of A Tracing Device In A Legally Obtainable Product Without Prior Congressional Or Judicial Approval Creates A New And Dangerous Erosion Of Rights Protected By The Fourth Amendment.

The use of taggants for the purpose of criminal investigation and prosecution is a case of first impression. In permitting their evidentiary use, the lower courts in this case have set a dangerous precedent

which in effect sanctions the erosion of individual rights guaranteed by the Fourth Amendment. Further, their rulings are contrary to the holdings and legal reasoning of this Court in Boyd v. United States, 116 U.S. 616 (1866), [Hereinafter cited as "Boyd"]; Katz v. United States, 389 U.S. 347 (1967), [Hereinafter cited as "Katz"]; and Smith v. Maryland, 442 U.S. 735 (1979), [Hereinafter cited as "Smith"].

The taggants used in this case permitted the monitoring of the actual use of the legitimate purchase of "Tovex 2." This was done without prior legislative or judicial approval. The purchaser was not given any warning of this situation and in fact taggants are designed to be invisible to the naked and untrained eye and cannot be extracted once placed in the explosive. A purchaser only knows that he signs a form for the sale, beyond that he has no knowledge or awareness that his further use of

the product is subject to government surveillance.

To rule that a purchaser waives his right to be free from government surveillance because he is knowingly visible only as a purchaser is the antithesis of this Court's analysis of the Fourth Amendment. In Katz, supra, this Court held that a person who uses a public telephone booth may surrender his right of privacy to visibility, i.e. "the uninvited eye", but not to his use of the phone, conversation, i.e. the "uninvited ear". Katz, 389 U.S. at 351 - 352. Justice Stewart explained:

> [T]he Fourth Amendment protects people, not places. What a person knowingly exposes to the public, even in his own home or office is not a subject of Fourth Amendment protection... (citations omitted) ...But what he seeks to preserve as private, even in an area accessible to the public, may be Constitutionally protected... (citations omitted)...

Katz, 389 U.S. at 351 - 352.

The analogy of this case to Katz,

supra, is that due to the surreptitious placement of the taggants in this case, the Petitioner had no knowledge of his continued "exposure" to surveillance. First, he could not knowingly expose his use of the product and therefore did not forfeit his Fourth Amendment rights. Second, his accessibility to the public in signing the form ceased at that point in time. He could not knowingly expose himself to alleged detection via taggants when he had no notice of their existence. His use, under Katz, remains protected, because he cannot be charged with knowingly revealing it.

The government's suggestion that the use of explosives in the parking lot creates an abandonment of these rights is misguided. Relying on Katz, this Court was careful to distinguish cases in which there is public awareness of a minor intrusion from those where no notice exists and a major intrusion occurs in Smith, supra. Known as the "pen

register" case, Smith concerned the mere recording (minor intrusion) of the existence of calls from one number to another, a practice explained in the telephone book. This is analogous to signing a form when explosives are purchased. In no way did this give a law enforcement agency the right to proceed further, i.e. record the conversations, without prior judicial approval (the major intrusion). The caller may have surrendered his right to privacy to the actual numbers called, but without notice, he could not forfeit his Fourth Amendment protection to his actual use of the phone conversation. To permit tracing the use of explosives in this case therefore would be to sanction the major intrusion without notice and in violation of Smith.

The most important issue before this Court is the destruction of Fourth Amendment protection if a government agency is allowed to initiate a criminal investigation by, in

essence, "bugging" a non-contraband item without prior judicial or legislative approval. While this case involves one product, explosives, the reasoning applied by the lower courts opens the door to undetected governmental monitoring of a person's use of any consumer (non-contraband) product without any probable cause. [See United States v. Moore, 562 F.2d 106 (1st Cir. 1977)] The logical application of the lower courts' rulings means that everything from toothpaste to baby food is subject to tracing. Potential for abuse is enormous even though under the circumstances the infringement may appear minimal or reasonable.

The duty of this Court to examine this intrusion and prevent it was best expressed in Boyd, supra.

> Though the proceeding in question is divested of many of the aggravating indicents of search and seizure...[i]t may be that is the obnoxious thing in

> its mildest and least repulsive form... [I]llegitimate and unconstitutional practices get their first footing in that way, namely: by silent approaches and slight deviations from legal modes of procedure. This can only be obviated by adhering to the rule that constitutional provisions for the security of person and property should be liberally construed.

Boyd, 116 U.S. 616, at 635.

Petitioner therefore avers that this new interpretation of the Fourth Amendment sets dangerous precedent, is contrary to the holdings of this Court and that certiorari should be granted to promote the interests of justice.

II. The Unauthorized Placement Of Taggants In Legally Obtainable Goods Threatens The Constitutional Right Of All Individuals To Personal Privacy.

The right of privacy has a more extensive scope than the Fourth Amendment protection against direct intrusions by the government. Rights of privacy, which have been only partially defined by particular

cases, have been recognized throughout the Constitution from the Preamble to the penumbras of the Bill of Rights, the concept of liberty in the Fifth and Fourteenth Amendments, and specifically the reservation of rights to the people in the Ninth Amendment.

The AFT taggants program is a particularly insidious assault on an individual's right to keep personal matters private because taggants are deliberately designed to collect information about the use of a legal purchase without the owner's knowledge. If such a system of surreptitious intrusion is allowed, expecially in the face of explicit rejection of authorizing legislation and avoidance of judicial approval, then which of the multitude of products, regulated or in some way marked with identifying serial numbers or characteristics, may not be subject to continued government surveillance.

The unauthorized, unconstitutional

exercise of power by ATF threatens the purchaser of any non-contraband goods with the inability to determine whether their use is ever private. The same reasoning that permits taggants in this case will apply to any consumer good because there is no requirement that a court or legislature determine that their use is justified constitutionally or otherwise. To permit their evidentiary use to stand in this case erodes the citizen's ability to be confident in his individual privacy and casts a "Big Brother" shadow on even the most innocent activity.

Where as in this case, the unilateral exercise of power by a government agency is permitted to exist and operate without guidelines, the very essence of our concept of privacy is destroyed. Its deceptive use literally threatens the "right to be let alone", so acutely foreshadowed in Boyd, supra, that is inherent to our nationalism. To permit its use in this case would be a

complete perversion of the fundamental right to privacy, this Court so jealously protects.

III. The Government Should Be Held To A Stricter Standard On The Introduction Of Scientific Evidence Than Applied In Frye v. United States, 293 F. 1013 (D. C. Cir. 1923), When It Is The Sole "Expert" Of An Experimental Program.

Petitioner's trial was the first in which evidence derived from taggants was used to prove criminal agency. Additionally, the government, who sought to introduce the evidence, had a virtual monopoly on the research and development of the taggant program. While being a "test case" will not necessarily eliminate new scientific evidence, it does require that a court more carefully scrutinize the foundation of that evidence particularly when the source of information is the party seeking to admit it.

The test of admissibility first developed in Frye v. United States, 293 F. 1013 (D. C. Cir. 1923), [Hereinafter cited as "Frye"] presumes that the "author" of the evidence or the group which verifies its accepted use is not the party who wants to introduce it, i.e. the Government. To assume otherwise is to rubber stamp every program controlled and designed by the government to be used in criminal prosecution.

Further, the ATF taggant program was still in an experimental stage and not available to outside research. Under these circumstances an overwhelming burden was placed on Petitioner. He could not present any expert testimony to contradict government witnesses that taggants were reliable and had gained general acceptance in the field because no nongovernment experts existed as to this program.

The discovery of fourteen (14) taggants at the scene of the explosion fell below the government's own standards of recovery (one to two hundred) and reliability for tracing (twenty). Still, the evidence was admitted. To admit evidence in this situation not only makes a mockery of Frye, supra, but gives the government essentially an unlimited and unbridled opportunity to introduce questionable evidence merely because of its own unfinished experiments and results in a denial of due process.

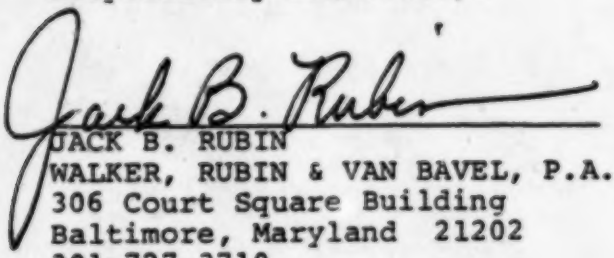
Petitioner avers that under the circumstances of this case, a greater burden of proof of reliability and acceptance should be placed on the government prior to the introduction of scientific evidence.

CONCLUSION

For the aforegoing reasons, Petitioner respectfully requests that this Honorable

Court grant a Writ of Certiorari,

Respectfully Submitted,



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I hereby certify that on the 9th day of October, 1981, three (3) copies of the aforegoing Petition for Writ of Certiorari were mailed to the Solicitor General, Department of Justice, Washington, D. C. 20530.

Jack B. Rubin

JACK B. RUBIN

UNITED STATES COURT OF APPEALS

FOR THE FOURTH CIRCUIT

No. 80-5063

United States of America,

Appellee,

v.

James L. McFillin,

Appellant.

Appeal from the United States District Court for the District of Maryland, at Baltimore. Frank A. Kaufman, District Judge.

Argued: June 5, 1981

Decided: August 12, 1981

Before PHILLIPS and MURNAGHAN, Circuit Judges, and WILLIAMS, District Judge.*

Jack B. Rubin (Sally C. Chester, Walker, Rubin and Van Bavel, P.A., on brief) for Appellant; Jane W. Moscowitz (Russell T. Baker, Jr., United States Attorney, Lynne A. Battaglia, Assistant United States Attorney

on brief) for Appellee.

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*The Hon. Richard L. Williams, United States District Judge for the Eastern District of Virginia, sitting by designation.

WILLIAMS, District Judge

The appellant, James L. McFillin, was convicted on December 19, 1980 of three violations of 18 U.S.C. § 844(i) arising out of the death on May 10, 1979 of Nathan A. Allen, Sr., the wounding of a passenger in Allen's truck, and the destruction of the vehicle by use of explosives. From this conviction he appeals, arguing that the district court erred in admitting evidence regarding miniscule particles, called taggants, which were placed in the explosive to permit tracing its ownership after detonation. Specifically, the appellant contends that placing taggants in the explosive violates his Fourth Amendment right to be free from unreasonable searches and seizures and his penumbral right of privacy. He also contends that the use of taggants is based on a novel scientific theory which is so unreliable that evidence

derived from taggants should not be presented to the jury. We hold that the appellant lacks standing to assert his Fourth Amendment claim, that no privacy rights attach to commercial transactions such as the purchase of an explosive, that the taggant evidence was properly admitted, and we affirm the judgment of conviction.

I

On May 10, 1979 at around 10:00 p.m., Nathan Allen and a friend got into Allen's truck to go home from work. As Allen turned on either the lights or the ignition, the truck exploded. Allen was killed and the friend was injured.

Allen and McFillin, the appellant, who are uncle and nephew, had been neighbors since 1978. McFillin believed his wife was in love with Allen. Somewhere around Easter, 1979, Mrs. McFillin told her husband that she would leave him as soon as school was out.

Two days before the murder, McFillin told a neighbor's son that he would like to blow up Allen's house.

On May 10, 1979, Allen was working the 3:00 to 11:00 p.m. shift. That morning he had an argument with Mr. and Mrs. McFillin. Also on that day, McFillin left his house in the late afternoon for at least one-half hour. This period of time would have been sufficient to attach or activate a bomb.

When McFillin returned home on May 10, he call his brother Bob and insisted that the two of them leave immediately to visit property owned by McFillin in West Virginia.

After the explosion, the Bureau of Alcohol, Tobacco and Firearms (ATF) examined the site. Pieces of black and white wire as well as blue and yellow wiring were found. Later, during a search pursuant to a warrant, wires matching the black and the blue and yellow wires were found in the trunk of

McFillin's car. Also in the trunk was a notebook in McFillin's handwriting containing dates and shifts which Allen had worked on those dates.

During 1978 and 1979, ATF was engaged in a pilot program to test the safety and effectiveness of taggants. Taggants are plastic, microscopic, color-coded chips which can be imbedded in explosives at the time of manufacture and which can be identified after detonation. The color code keys in with records maintained by ATF and allows the tracing of the explosive to its manufacturer and purchasers.

Taggants were found at the scene of the crime. All but one of the taggants found around Allen's truck and analyzed by ATF indicated that the explosive used in the bomb was Tovex 220, manufactured December 2, 1978 in DuPont's Martinsburg, West Virginia plant. Some of that batch of Tovex 220 was

eventually sold to Lawrence Jenkins, a registered dealer in Martinsburg, West Virginia. On March 10, 1979, Jenkins sold two sticks of Tovex 220 to McFillin.

After the event, the defendant had many conversations with ATF agents and was caught in several obvious lies. McFillin went so far as to buy additional sticks of explosives and present them to the ATF agents as that which he bought from Jenkins in West Virginia in March.

II

McFillin contends that the use of color-codes taggants to identify him as the purchaser of the explosives that killed Nathan Allen violated his Fourth Amendment right against unreasonable searches and seizures. We hold that McFillin had no expectation of privacy in the explosives nor did he have a possessory interest. As a result, McFillin lacks standing to assert a Fourth Amendment claim.

The taggants were recovered in the parking lot where Allen's truck exploded. McFillin had no expectation of privacy in that parking lot. The mere fact that McFillin at one time owned the explosives gives him no claim. Possession alone, without an expectation of privacy, is insufficient to confer standing. United States v. Salvucci, 448 U.S. 83, 100 S. Ct. 2547 65 L.Ed.2d 619 (1980). To the extent his possession of the explosives might have given him a claim, he lost that claim by abandoning the explosives in a public area. When a person has

> so relinquished his interest in the property that he no longer retains a reasonable expectation of privacy in it at the time of the search

he has no standing to complain of a Fourth Amendment violation. United States v. Cella, 568 F.2d 1266, 1283 (9th Cir. 1977). McFillin could have no reasonable expectation of privacy in the parking lot debris from

this tragic explosion. His Fourth Amendment argument must fail.

III

McFillin next contends that the use of taggants in the explosives invades an area of property and personal information that individual citizens justifiably expect to keep private. The expectation of privacy, he argues, stems from the lack of general, public knowledge about the taggant problem. McFillin goes on to argue that to allow this surreptitious intrusion on personal liberty is to open the flood gates to government surveillance of many innocent activities of citizens.

The right of privacy is more properly raised in the realm of birth, death, intimate relationships, education of children, free exercise of religion and other rights of association the intrusion upon which affects an essential component of a person's dignity. Cf. Paul v. Davis, 424 U.S. 693, 713, 96 S.Ct.

1155, 47 L.Ed.2d 405, reh. denied 425 U.S. 985, 96 S.Ct. 2194, 48 L.Ed.2d 811 (1976); Einstadt v. Baird, 405 U.S. 438, 453-454, 92 S.Ct. 1029, 31 L.Ed.2d 349 (1972); Stanley v. Georgia, 394 U.S. 557, 568, 89 S.Ct. 1243, 22 L.Ed.2d 542 (1969); Loving v. Virginia, 388 U.S. 1, 87 S.Ct. 1817, 18 L.Ed. 2d 1010 (1967); Griswold v. Connecticut, 381 U.S. 479, 486, 85 S.Ct. 1678, 14 L.Ed. 2d 510 (1965); Prince v. Massachusetts, 321 U.S. 158, 166, 64 S.Ct. 438, 88 L.Ed. 645, reh. denied 321 U.S. 804, 64 S.Ct. 784, 88 L.Ed 1090 (1944); Skinner v. Oklahoma, 316 U.S. 535, 541, 62 S.Ct. 1110, 86 L.Ed. 1655 (1942); Pierce v. Society of Sisters, 268 U.S. 510, 535, 45 S.Ct. 571, 69 L.Ed. 1070 (1925); Meyer v. Nebraska, 262 U.S. 390, 399, 43 S.Ct. 625, 67 L.Ed. 1042 (1923); Lovisi v. Slayton, 539 F.2d 349, 351 (4th Cir.), cert. denied 429 U.S. 977, 97 S.Ct. 485, 50 L.Ed. 585 (1976). The use of taggants here reveals

nothing intimate about the appellant. Rather the taggants simply link the debris of the explosion with the appellant's purchase of explosives in his own name from a licensed dealer. This sort of commercial transaction is different in kind from the areas of interest traditionally protected by the right of privacy.

IV

McFillin also argues that the trial court committed reversible error in admitting expert testimony as to the use of taggants. Taggant evidence is new in the criminal courts. He argues that under Frye v. United States, 293 F. 1013 (D.C. Cir. 1923), evidence deduced from a new scientific theory should only be admitted if it has been generally accepted in its field:

> Just when a scientific principle or discovery croses the line between the experimental and the demonstrable stages is difficult to define. Somewhere in a twilight zone the evidential force of the principle must be recognized, and while courts go a

> long way admitting expert testimony deduced from a well recognized scientific principle or discovery, the thing from which the deduction is made must be sufficiently established to have gained acceptance in the particular field to which it belongs.

The appellant contends that taggants are not recognized by the explosives industry as a reliable tracing method. We are of the opinion that the trial court, after hearing the testimony of two experts, was within its discretion in allowing the evidence to be presented to the jury. Further, we feel that the evidence received by the trial court demonstrates that the use of taggants in explosives rests upon well-established scientific principles, so as to make the Frye test inapplicable.

The trial court conducted an extensive hearing to determine the admissibility of expert testimony regarding taggant identification. Testimony was presented by two qualified experts. Ronald Elliot Palmer, a

forensic chemist with the Bureau of Alcohol, Tobacco & Firearms (ATF), testified that taggants provide a non-destructible method of determining the product, manufacturer, date and shift of manufacture of the explosive. The date-shift code is translated from the permutations and combinations of colors of the taggants. ATF maintains a registry of the codes. He further testified that the taggant program does not involve a novel scientific theory. Rather, the use of taggants to determine the place and date of manufacture of an explosive after it has been detonated is a simple matter of distributing the taggants in the explosive and recovering them after the explosion. Statistical methods are then used to identify the originating batch. While some of the taggants are burned or shattered by the forces of the explosion, those that survive remain unaltered and the codes can be read.

Gerald H. Fuller, manager of the ATF program, also testified. He told the court that taggants had been tested in over 300 explosions and some taggants survived and were recovered in all but one improperly conducted test. Taggants were recovered in statistically adequate numbers in all the properly conducted tests. Fuller also testified about the problems in dispersing taggants in the explosive during manufacture. Before manufacture, the taggants may clump together because of a static charge. However, the manufacturing process distributes them evenly throughout the product. Tovex 220 is manufactured in batches. Each batch receives identifying taggants. A small amount of each batch remains in the machinery and is introduced into the new batch. Thus, there is some possibility of contamination. Fuller stated that contamination is accounted for by the statistical analysis employed to

determine the batch of origin.

We feel that the court below fully explored the reliability of taggants with the aid of the testimony of two experts. Furthermore, this testimony demonstrated that no novel scientific principles are involved in taggant identification. Rather, the use of taggants rests upon the commonplace scientific principles that small solid particles can be dispersed in a viscous substance, that these particles can be color-coded in a way which survives the explosion, that they can be recovered and read after detonation, and that statistical measures can allow for contamination and identify the batch of origin. These simple principles are very different from, for example, the behavioral assumptions which must be made in order to make polygraph useful. Here the taggants did survive the

explosion in sufficient quantity to permit identification, they were recovered and the batch of origin was determined. Furthermore, the taggant evidence is corroborated by ATF records which demonstrate that McFallin [sic] purchased explosives from the same batch identified by the taggants.

The trial court thus was within its discretion in admitting the taggant evidence.

AFFIRMED.